

## WHAT IS CLAIMED IS:

1. A synchronous induction motor comprising:  
a stator provided with a stator winding;  
a rotor rotating within said stator;  
a cage-type secondary electric conductor provided in  
a peripheral portion of a rotor yoke portion constituting  
said rotor; and  
a permanent magnet inserted into the rotor yoke  
portion and having a two-pole structure,  
wherein the magnetomotive force generated by one pole  
of said rotor is set to a value equal to or less than 10 %  
of a peak value in a predetermined range near an electrical  
angle 0 degree or 180 degrees.
2. A synchronous induction motor as claimed in claim 1,  
wherein said range equal to or less than 10 % is set to  
electrical angles 0-10 degrees and 170-180 degrees.
3. A synchronous induction motor as claimed in claim 1  
or 2, wherein the magnetomotive forces generated by said  
rotor in the other range of the electrical angle than said  
range equal to or less than 10 % are distributed in a sine  
wave shape.
4. A synchronous induction motor as claimed in claim 1  
or 2, wherein the magnetomotive forces generated by said  
rotor in the other range of the electrical angle than said  
range equal to or less than 10 % are distributed in a step-  
like chevron shape having two steps or more.
5. A synchronous induction motor as claimed in claim 1,

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2, 3 or 4, wherein the synchronous induction motor is mounted on a compressor.

6. A synchronous induction motor as claimed in claim 5, wherein the compressor is used in an air conditioning device or an electric refrigerator.

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